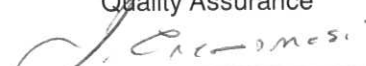
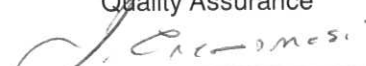
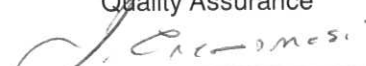
 <p>CARLO GAVAZZI</p> <p>CARLO GAVAZZI SPACE SpA</p>	<h1>AMS02-TCS</h1>	<p>DOC N°: AMSTCS-RP-CGS-007</p> <p>ISSUE : 1 DATE: 17.10.2008</p> <p>PAGE : 1 of 21</p>
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INSPECTION REPORT

APPLICABLE DOC. REF.	PROC. REF. N.A.								
<p>ITEM INSPECTED (Name, P/N, S/N) : WAKE RADIATOR 22-AMS-000.00.00</p> <p>RAM RADIATOR 21-AMS-000.00.00 TRACKER RADIATOR 25-AMS-000.00.00</p>									
<p>REQUIREMENT SATISFIED</p> <p>Manufacturing according to aerospace standards</p>									
<p>INSPECTION (Action/Results)</p> <p><i>On 15 , 16 and 17 October 2008 an incoming inspection has been performed at the CERN institute in Geneve on the following AGENCY FURNISHED ITEMS :</i></p> <table data-bbox="177 947 1422 1081"> <tr> <td>1)RAM RADIATOR Panel plus Heaters</td> <td>21-AMS-000.00.00 Rev. B</td> </tr> <tr> <td>2)WAKE RADIATOR Panel plus Heaters</td> <td>22-AMS-000.00.00 Rev. C</td> </tr> <tr> <td>3)TRACKER RADIATOR Panels (2 items) plus Heaters</td> <td>25-AMS-000.00.00 Rev. A</td> </tr> </table> <p><i>This Report intends to present the status of the hardware in order to allow the ASI Agency to proceed with the formal acceptance.</i></p>		1)RAM RADIATOR Panel plus Heaters	21-AMS-000.00.00 Rev. B	2)WAKE RADIATOR Panel plus Heaters	22-AMS-000.00.00 Rev. C	3)TRACKER RADIATOR Panels (2 items) plus Heaters	25-AMS-000.00.00 Rev. A		
1)RAM RADIATOR Panel plus Heaters	21-AMS-000.00.00 Rev. B								
2)WAKE RADIATOR Panel plus Heaters	22-AMS-000.00.00 Rev. C								
3)TRACKER RADIATOR Panels (2 items) plus Heaters	25-AMS-000.00.00 Rev. A								
<table> <tr> <td>Signature</td> <td>Operator</td> <td>Quality Assurance</td> <td>C.C. 3/4/08 C. Cuppen</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Signature	Operator	Quality Assurance	C.C. 3/4/08 C. Cuppen				
Signature	Operator	Quality Assurance	C.C. 3/4/08 C. Cuppen						
									



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INSPECTION REPORT

INSPECTION (Action/Results)

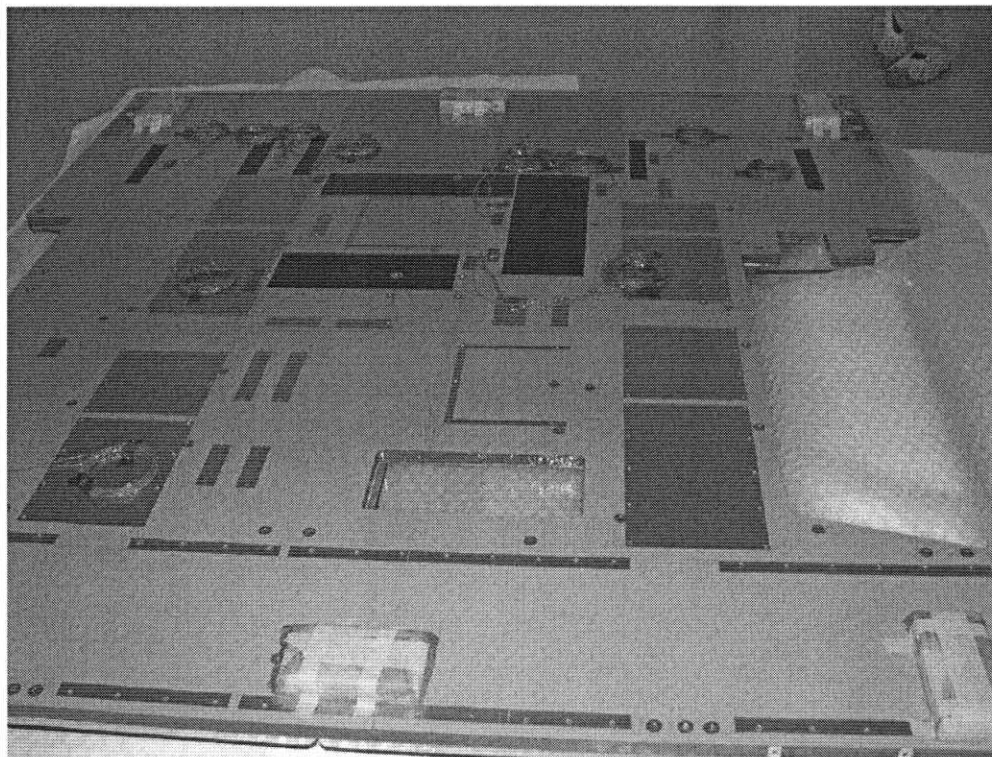
Visual Inspection results:

WAKE RADIATOR 22-AMS-000.00.00

RADIATOR CRATES SIDE

1) The item structure has been found :

- a) Free of dust and other particles**
- b) Free from finger-prints**
- c) Presence of some adhesives and of greasy remains has been noticed . Some stains and spots can be noticed on the surface. Final cleaning is required.**
- d) No scratches or deformation and cracks have been noticed**
- e) No visible corrosion or moisture have been noticed**





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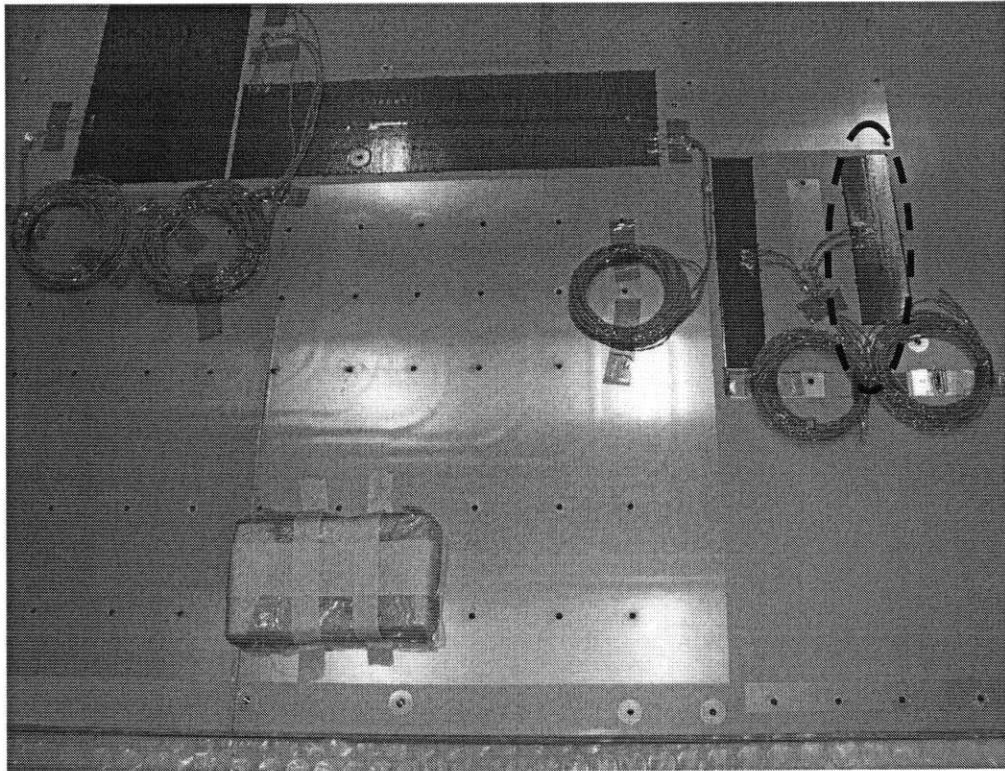
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2) The hardware has been found with no identification label

3) The absorbing material blocks placed on the radiator side to protect it and to act as a spacer when it is layed down in its transport container have been fixed to the flight radiator surface with paper tape.

The paper tape has been replaced with a kapton tape .

4) At a first look on the radiator surface the path followed by the internal heat pipes is clearly visible (probably due to the surface treatment)





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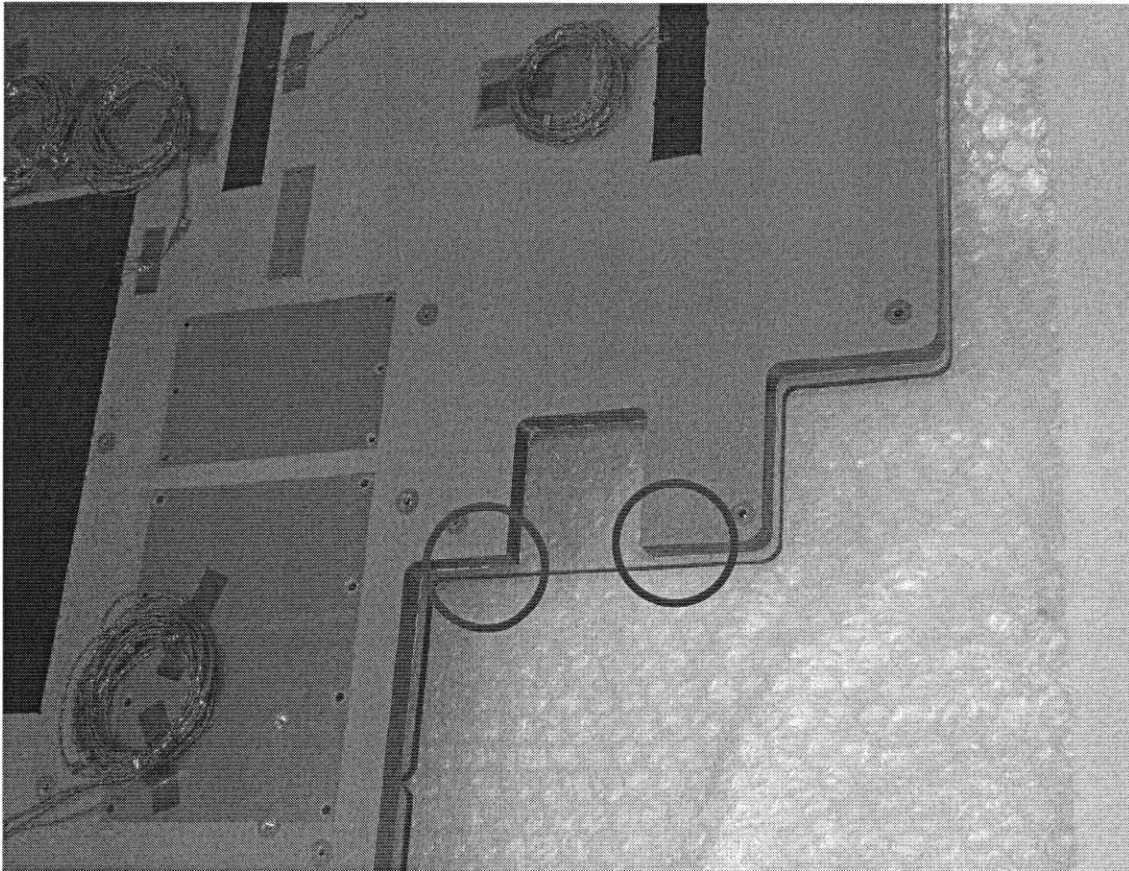
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5) The cut out added to the WAKE radiator according to ECO 00129 has very sharp edges and it will require a recovery activity. (NCR-TCS-CGS-C-003)



6) The helicoils which have been inserted according to the AIDC internal procedure have not been cleaned and they are red (NCR-TCS-CGS-C-004)



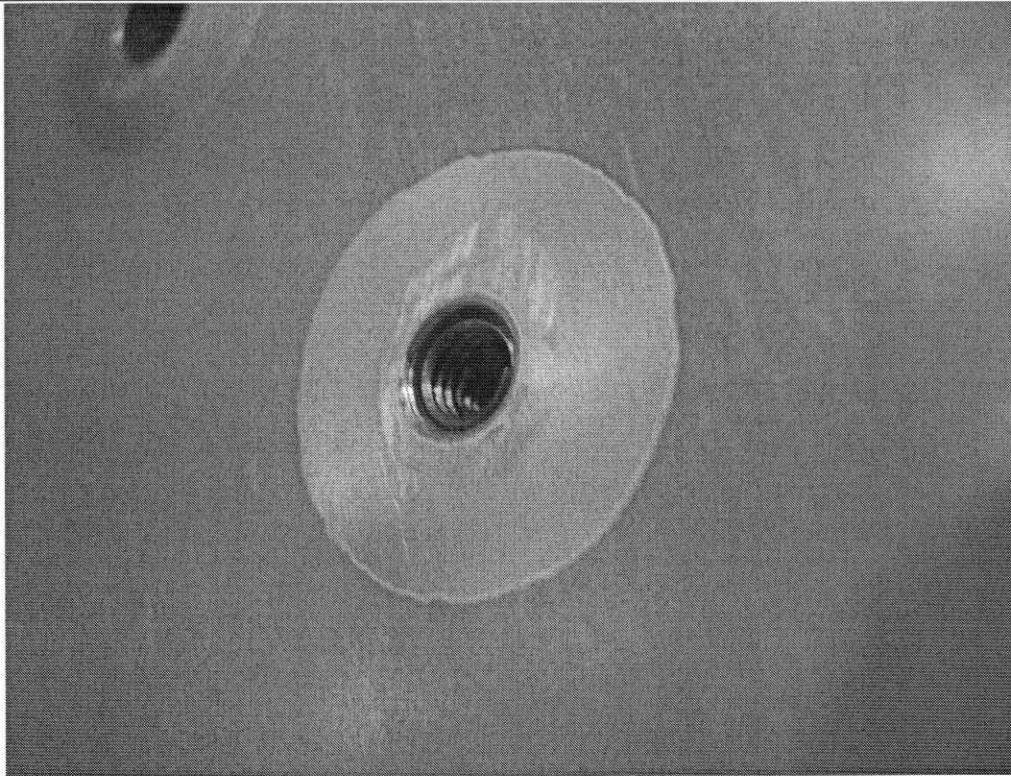
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7)The Heaters on the radiator surface show some defects as already indicated by M.Molina in the late August ; in particular

- a) Most of the heaters present a “half-moon” debonding area in correspondance of the soldered wires.**
- b) Some of the heaters present Single bubbles**
- c) Some of the heaters present Diagonal wrinkles**

The heaters which present a debonding area are shown in NCR-TCS-CGS-C-001



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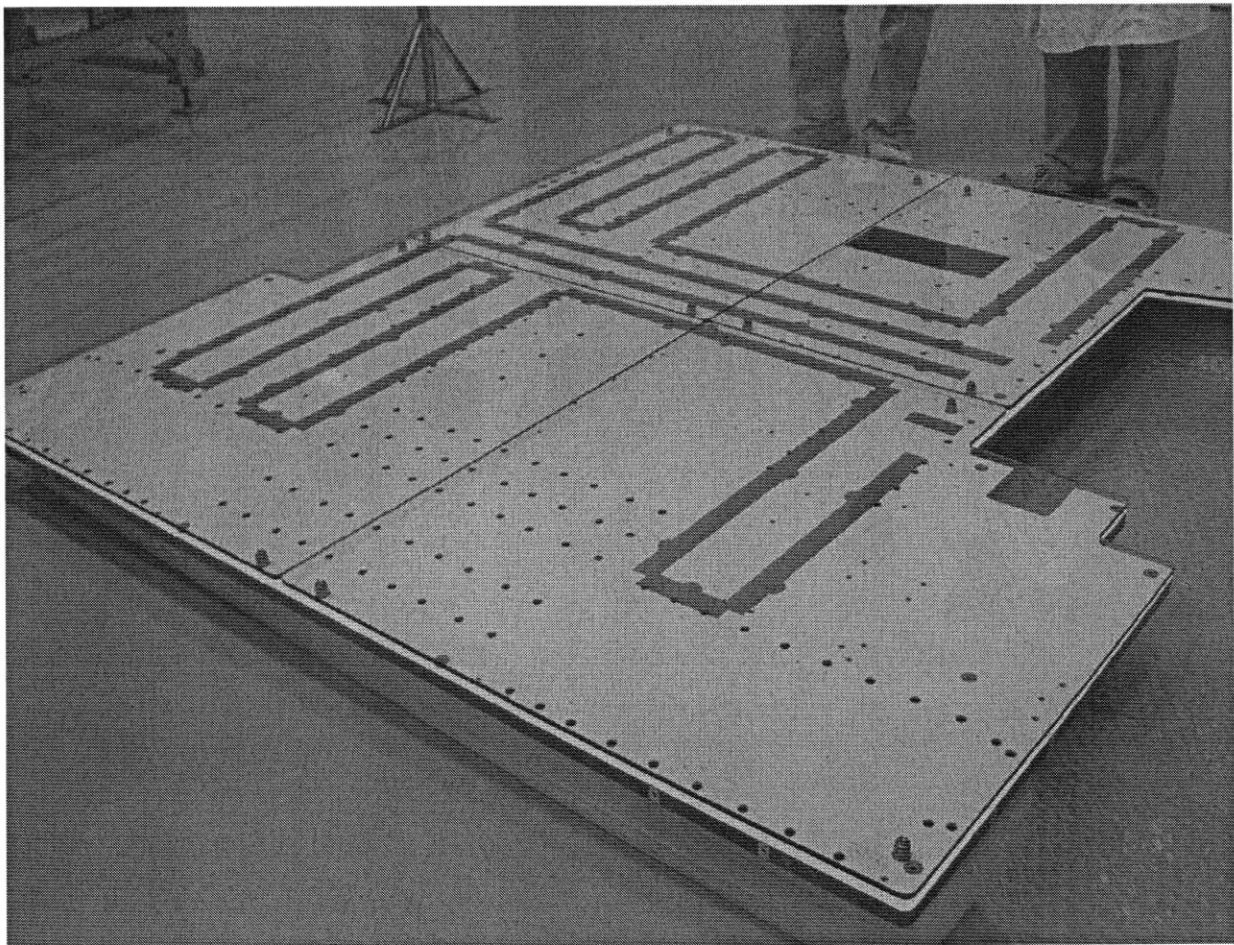
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RADIATIVE SIDE

1) The item structure has been found protected with its protection shields

The Paint SG121FD results to be uniformly applied and there were no release of visible particles. It results rough at the contact.



Acc. to the drawing the paths where the heat pipes have to be glued are treated with alodine.

***2) The tag of the inserted self-locking helicoils (number of 6) have not been removed
The holes have been identified in sheet 9 of 10 of 22-AMS-000.00.00.***



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3) All the holes from this side are not cleaned and in particular it has been noticed the presence of many pieces of glue and metal filings inside . (NCR-TCS-CGS-C-004)

GENERAL

The Data Package has been found not complete and not structured with a clear table of contents . NCR-TCS-CGS-C-005 traces the missing information and the performed actions.



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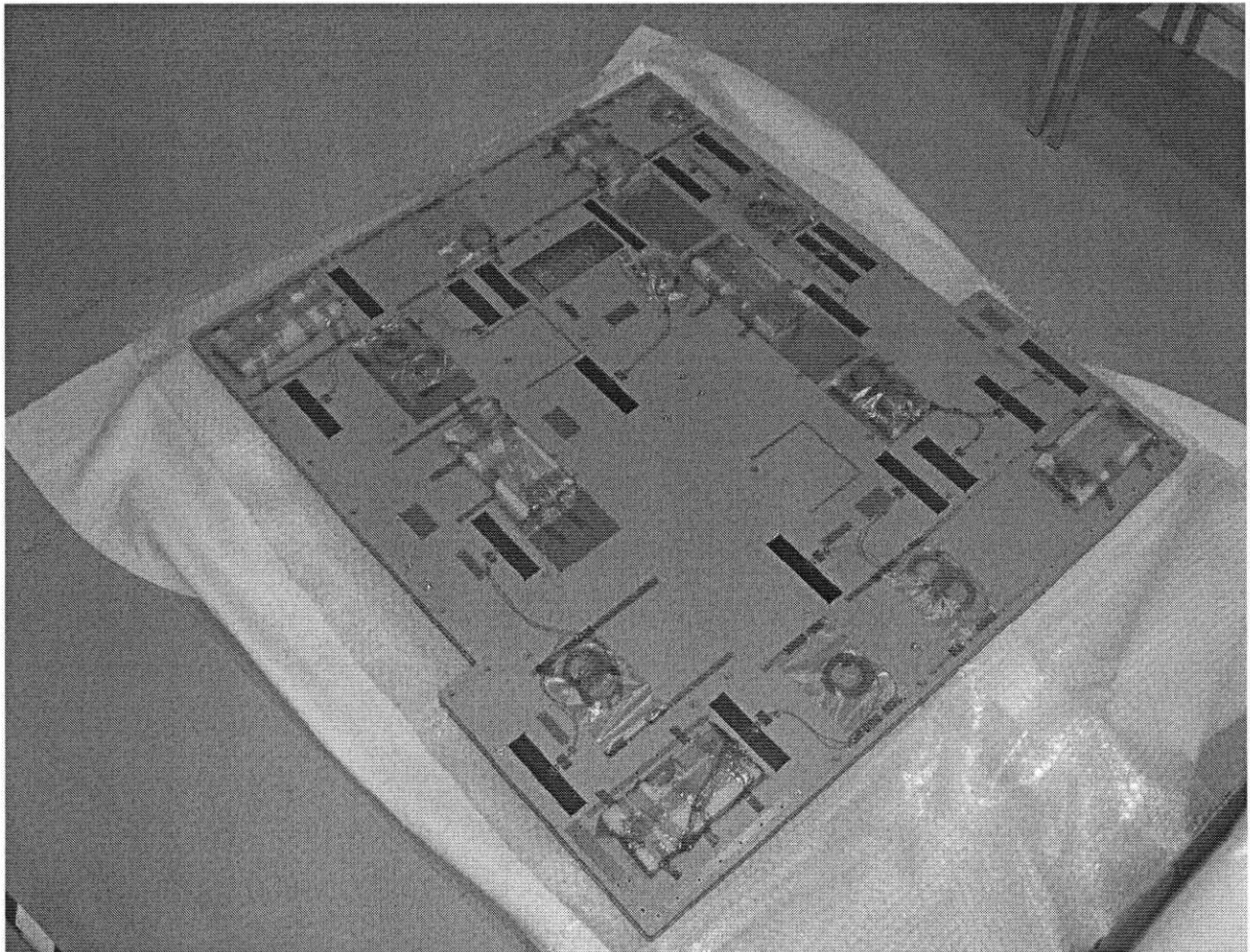
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RAM RADIATOR 21-AMS-000.00.00 **RADIATOR CRATES SIDE**



1) The item structure has been found :

- a) Free of dust and other particles**
 - b) Free from finger-prints**
 - c) Presence of some adhesives and of greasy remains has been noticed. Some stains and spots can be noticed on the surface. Final cleaning is required.**
 - d) No scratches or deformation and cracks have been noticed**
- The reworked area , is shown in the picture below.**

Apart from the four injection holes no trace of damages has been noticed.



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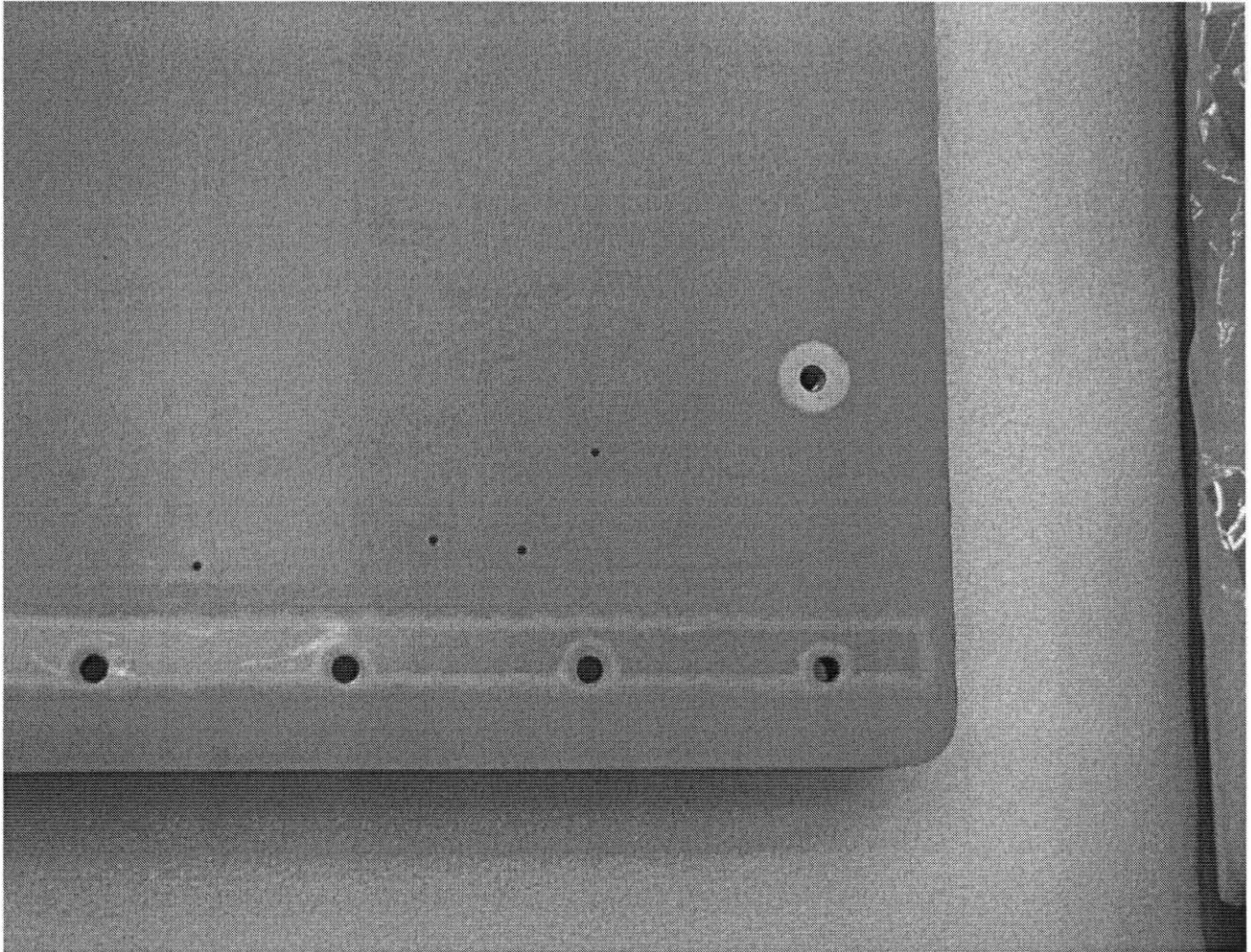
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e) No visible corrosion or moisture have been noticed



- 2) The hardware has been found with no identification label*
- 3) The absorbing material blocks placed on the radiator side to protect it and to act as a spacer when it is layed down in its transport container have been fixed to the flight radiator surface with paper tape.
The paper tape has been replaced with a kapton tape .*
- 4) The helicoils which have been inserted according to the AIDC internal procedure have not been cleaned and they are red (NCR-TCS-CGS-C-004)*
- 5) The Heaters on the radiator surface show some defects as already indicated by M.Molina*



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in the late August ; in particular

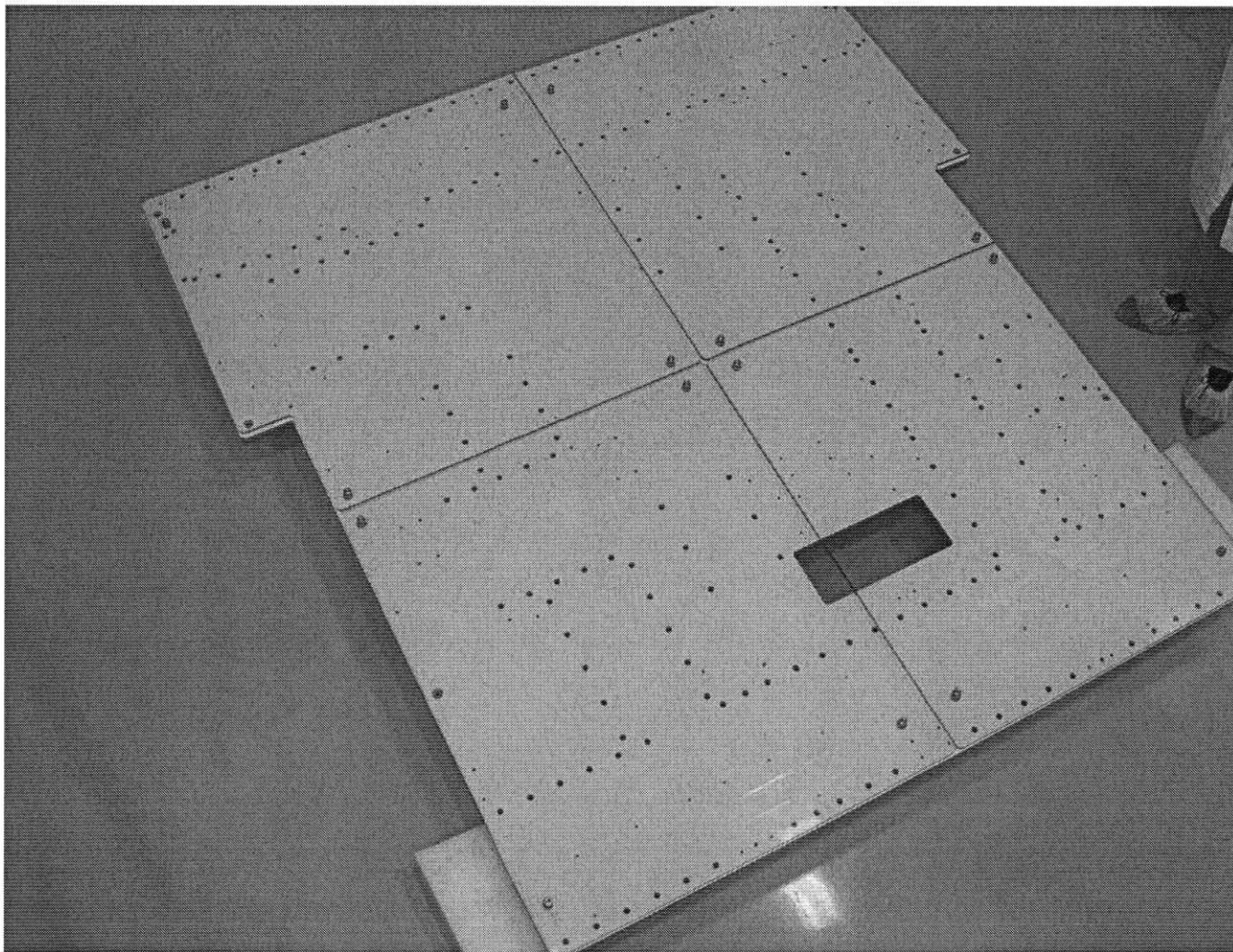
a)Most of the heaters present a “half-moon” debonding area in correspondance of the soldered wires.

b) Some of the heaters present Single bubbles

c) Some of the heaters present Diagonal wrinkles

The heaters which present a debonding area are shown in NCR-TCS-CGS-C-006

RADIATIVE SIDE





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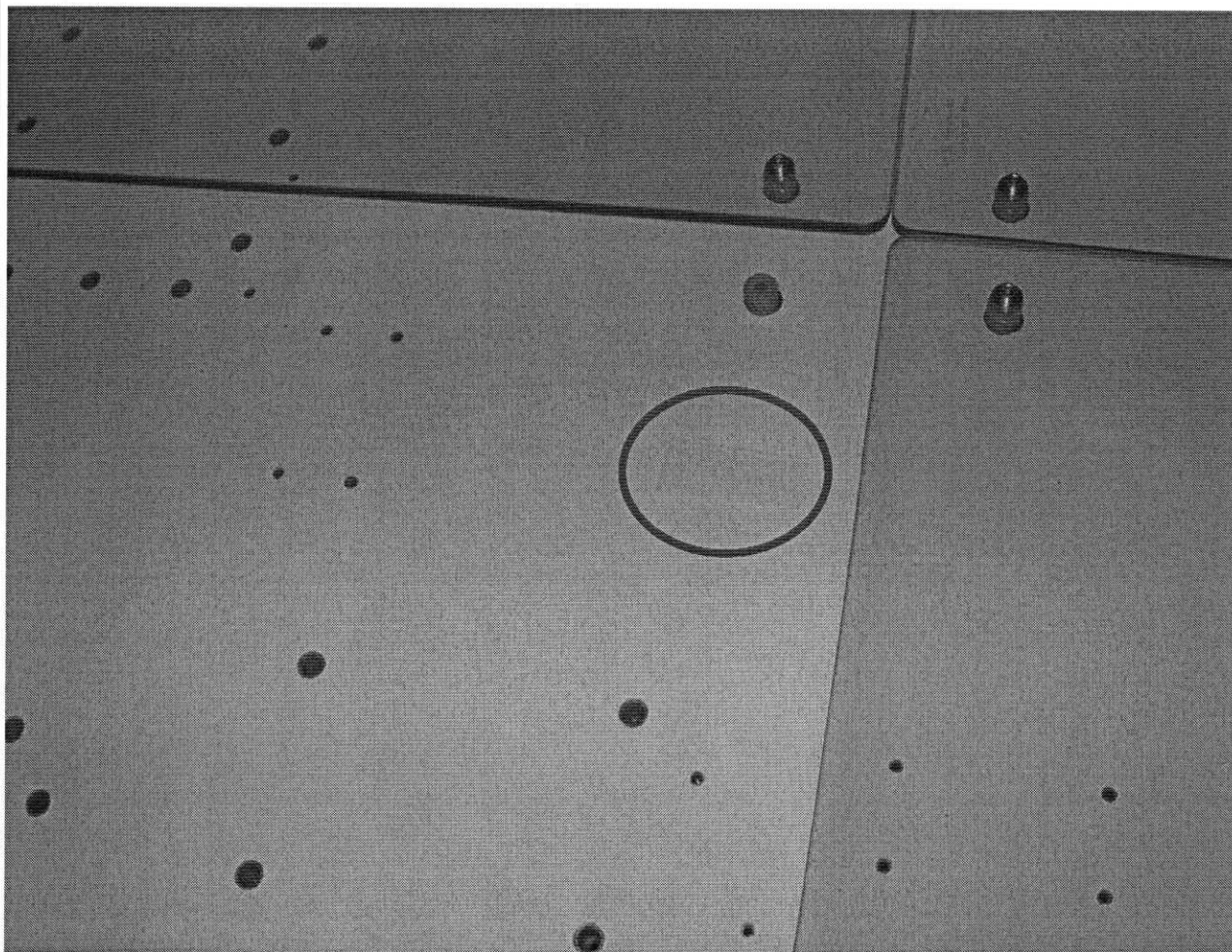
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1) The item structure has been found with protection shields installed ; the following has been noticed :

- a) Free of dust and other particles**
- b) Free from finger-prints**
- c) No scratches or deformation and cracks have been noticed**
- d) No visible corrosion or moisture have been noticed**
- e) The Paint SG121FD results to be uniformly applied and there were no release of visible particles. . It results rough at the contact.**

The reworked area documented is shown in the picture below



2) The area around one hole of the RAM Radiator which had to be treated with



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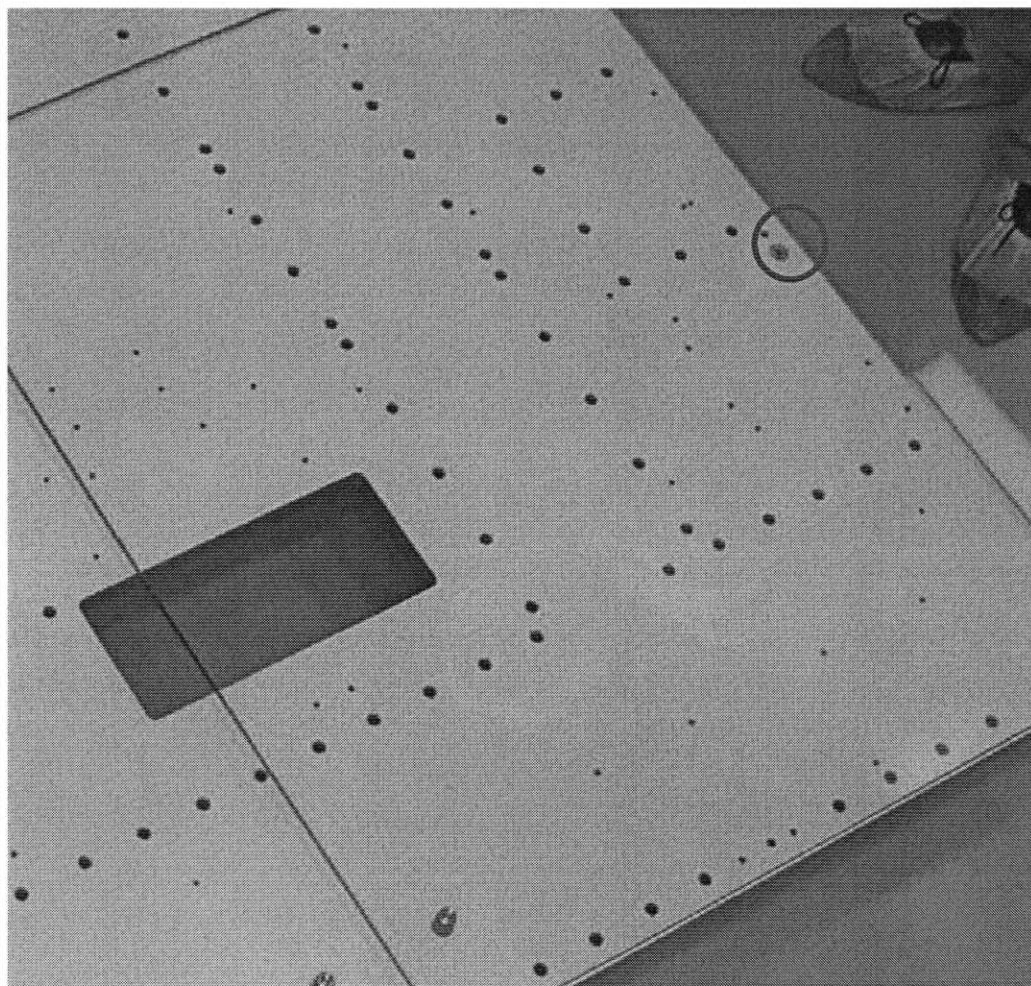
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alodine for the bonding strap connection has been painted with SG121FD white paint (NCR-TCS-CGS-C-004)





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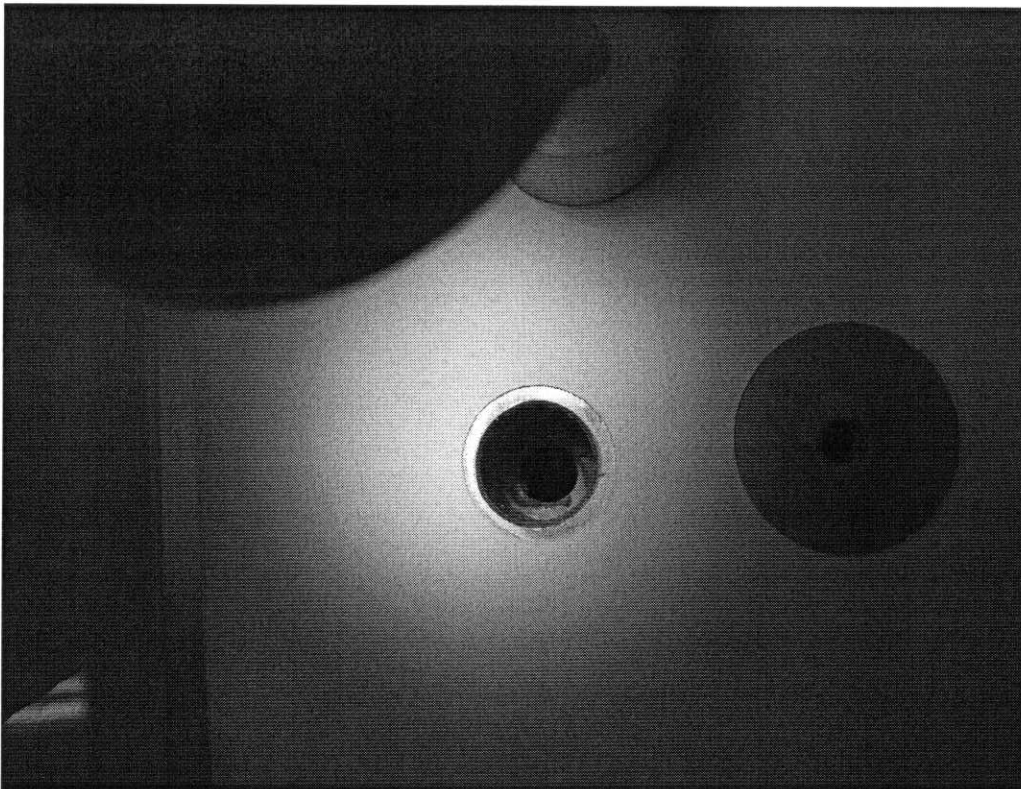
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- 3) *All the holes from this side are not cleaned and in particular it has been noticed the presence of many pieces of glue and metal filings inside . (NCR-TCS-CGS-C-004)*



GENERAL

The Data Package has been found not complete and not structured with a clear table of contents ; NCR-TCS-CGS-C-005 traces the missing information and the performed actions.



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TRACKER RADIATOR 25-AMS-000.00.00

There are two TRACKER RADIATORS

a) AIDC Identification number 20672276 (CGS S/N 02 No label)

HEATER SIDE

1) The item structure has been found :

- a) Free of dust and other particles*
- b) Free from finger-prints*
- c) Presence of some adhesives and of greasy remains has been noticed*
- d) No scratches or deformation and cracks have been noticed*
- e) No visible corrosion or moisture have been noticed*

2) The hardware has been found with no identification label

3) The Heaters on the radiator surface show some defects

a) Most of the heaters present a "half-moon" debonding area in correspondance of the soldered wires.

b) Some of the heaters present Single bubbles

c) Some of the heaters present Diagonal wrinkles

The heaters which present a debonding area are shown in NCR-TCS-CGS-C-007



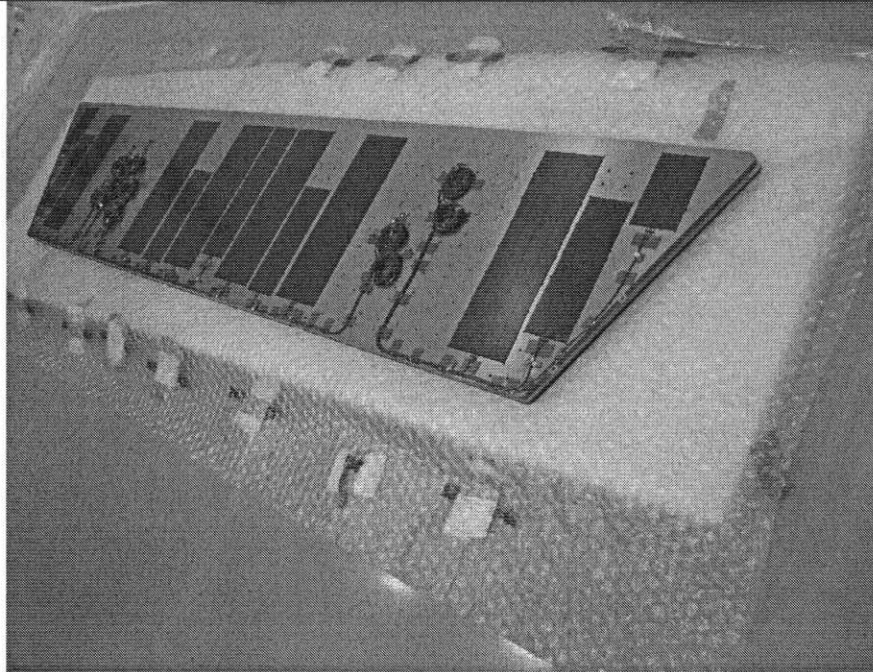
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RADIATIVE SIDE

- 1) *The item structure has been found with protection shields installed ; the following has been noticed :*
 - a) *Free of dust and other particles*
 - b) *Free from finger-prints*
 - c) *No scratches or deformation and cracks have been noticed*
 - d) *No visible corrosion or moisture have been noticed*
 - e) *The Paint SG121FD results to be uniformly applied and there were no release of visible particles.*
- 2) *All the holes from this side are not cleaned inside and in particular it has been noticed the presence of many pieces of glue*



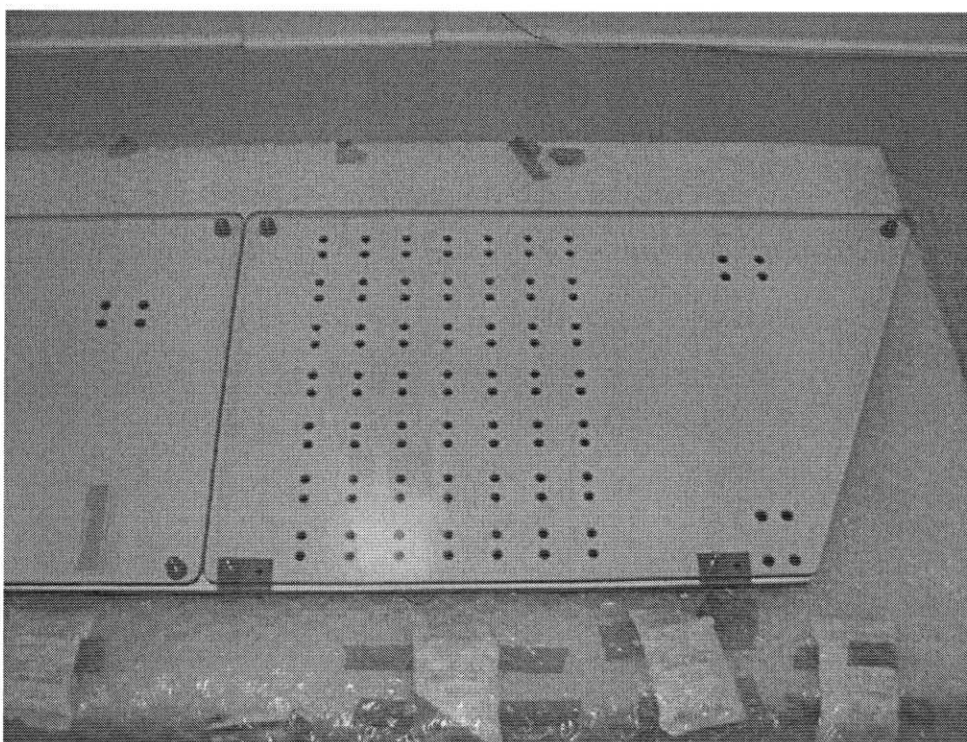
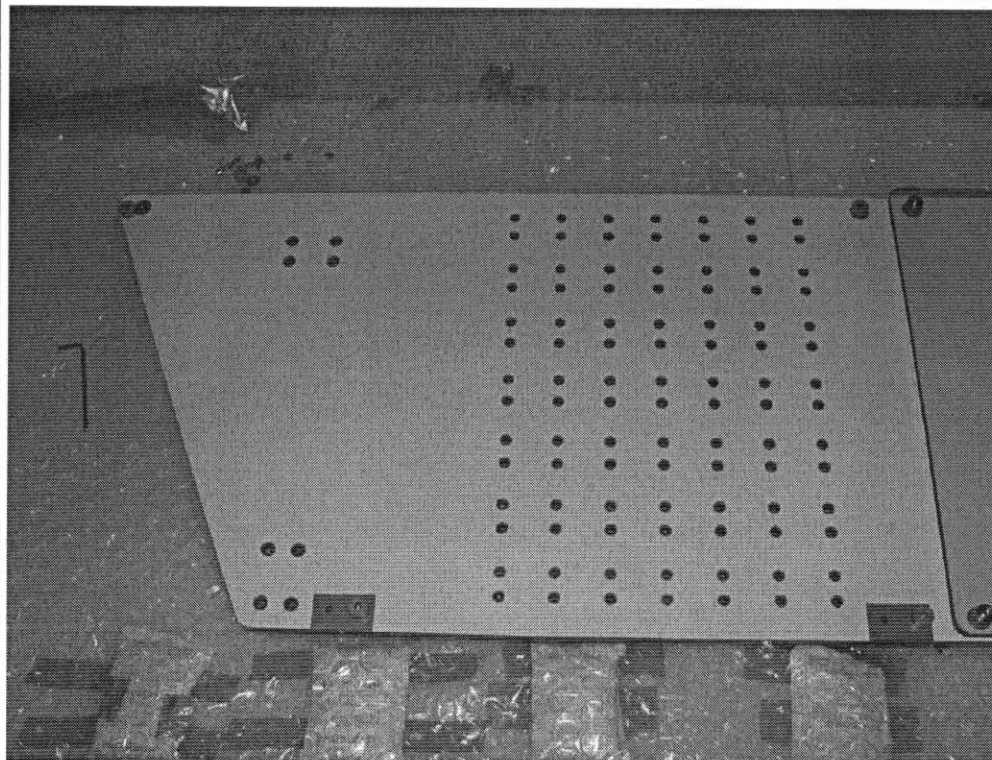
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- b) AIDC Identification number 20672275 (CGS S/N 01). The identification label was attached with a metal wire at one shield fixing screw.**



HEATER SIDE

- 1) The item structure has been found :**
- a) Free of dust and other particles**
 - b) Free from finger-prints**
 - c) Presence of some adhesives and of greasy remains has been noticed**
 - d) No scratches or deformation and cracks have been noticed**
 - e) No visible corrosion or moisture have been noticed**



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2) The surface treatment is very different from the surface treatment of the Tracker Radiator S/N 2. (NCR-TCS-CGS-C-002)

While the S/N 2 is evidently gold alodined the S/N 1 present a different aspect



3) The Heaters on the radiator surface show some defects

a)Most of the heaters present a “half-moon” debonding area in correspondance of the soldered wires.

b) The heaters which present a debonding area are shown in NCR-TCS-CGS-C-007



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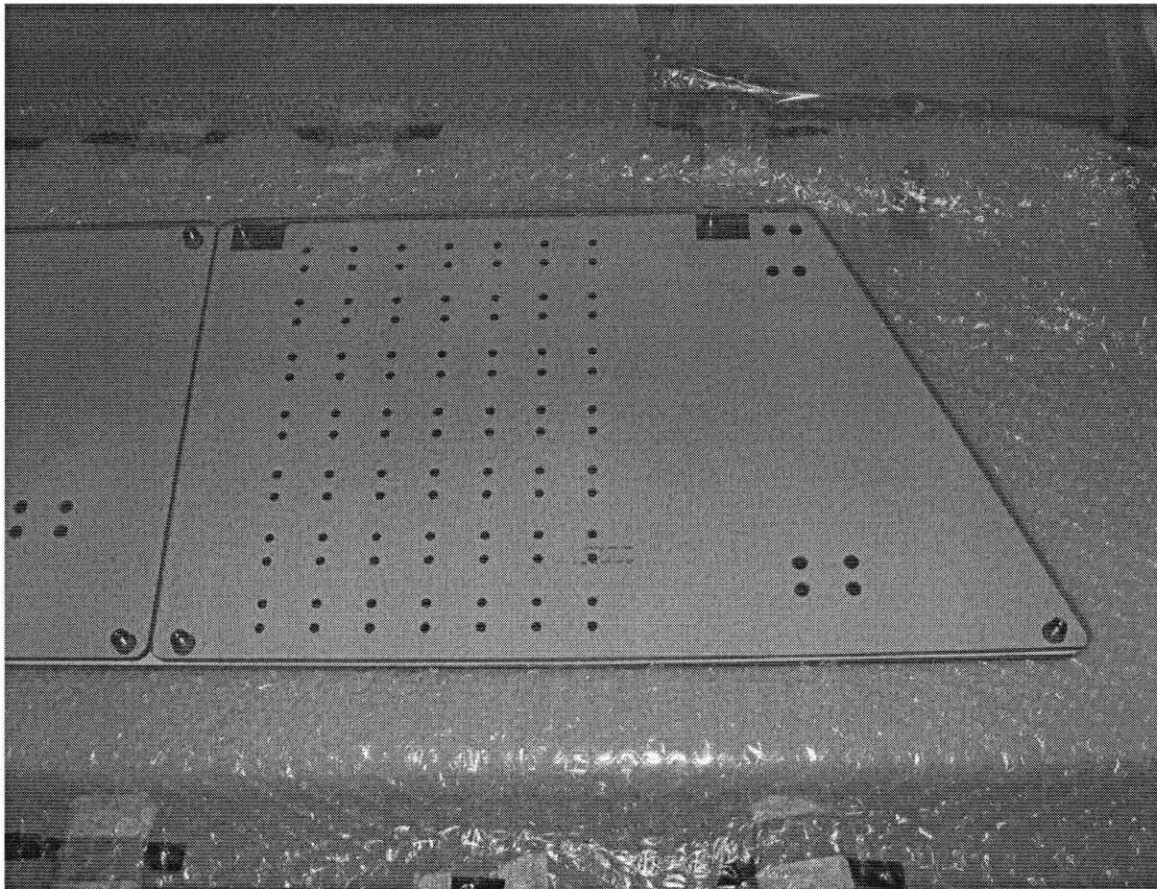
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RADIATIVE SIDE

- 1) *The item structure has been found with protection shields installed ; the following has been noticed :*
- a) Free of dust and other particles*
 - b) Free from finger-prints*
 - c) No scratches or deformation and cracks have been noticed*
 - d) No visible corrosion or moisture have been noticed*
 - e) The Paint SG121FD results to be uniformly applied and there were no release of visible particles.*





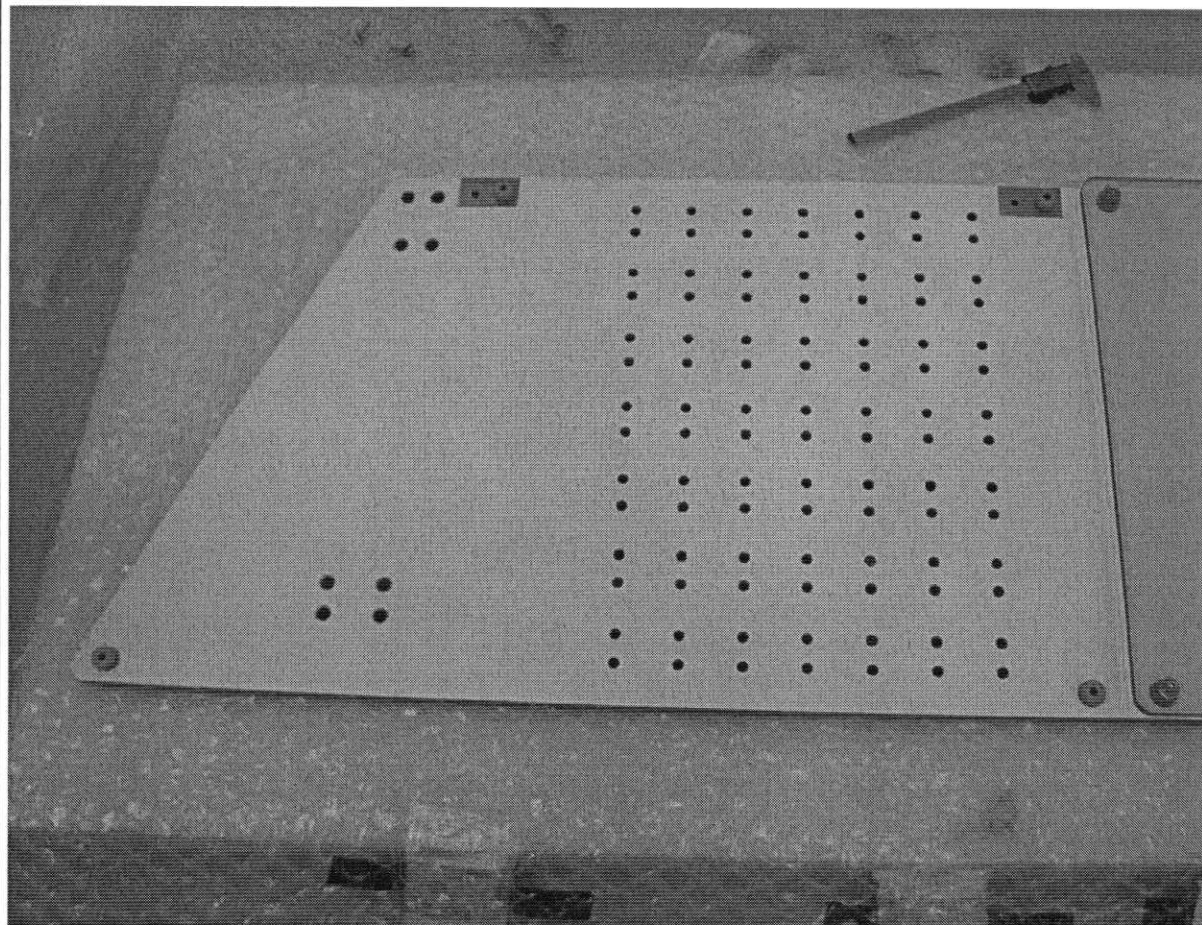
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2) All the holes from this side are not cleaned inside and in particular it has been noticed the presence of many pieces of glue



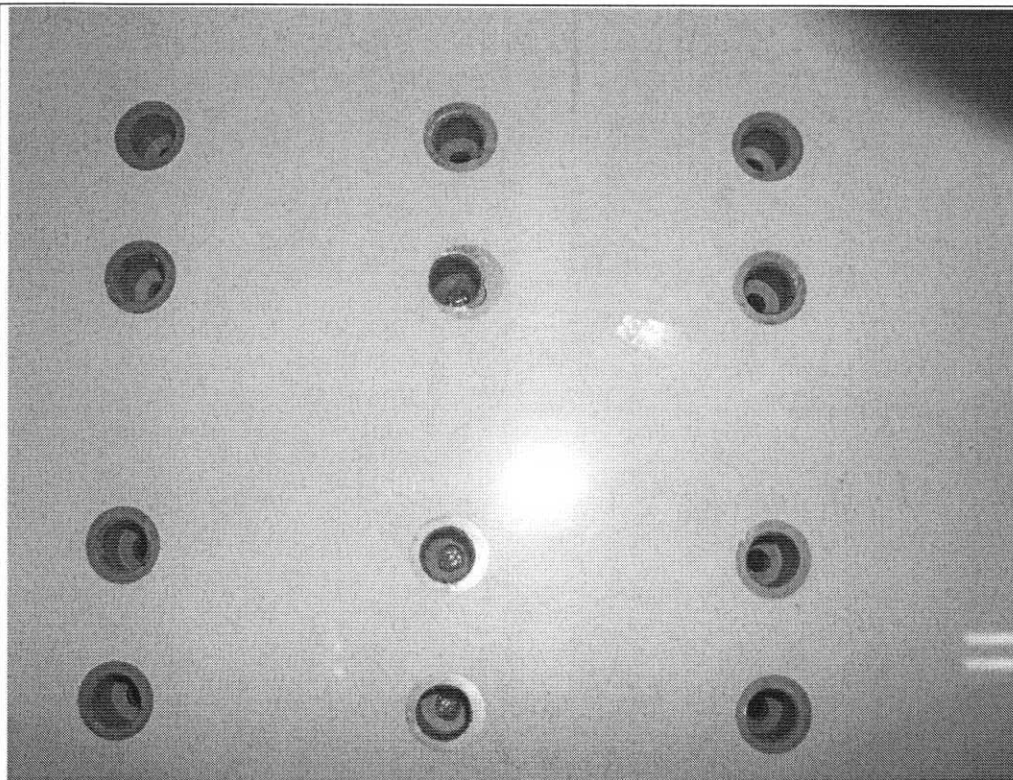
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CONCLUSIONS

The following NCRs have been opened to trace the issues found :

***NCR-TCS-CGS-C-001 , NCR-TCS-CGS-C-002 , NCR-TCS-CGS-C-003 , NCR-TCS-CGS-C-004 ,
NCR-TCS-CGS-C-005 , NCR-TCS-CGS-C-006 , NCR-TCS-CGS-C-007 .***

***A dedicated Non Conformance Review Board shall be performed in order to classify the
NCRs and to identify the recovery actions (if any) to complete the Radiators hand-over from
ASI to CGS.***